FIG. 1

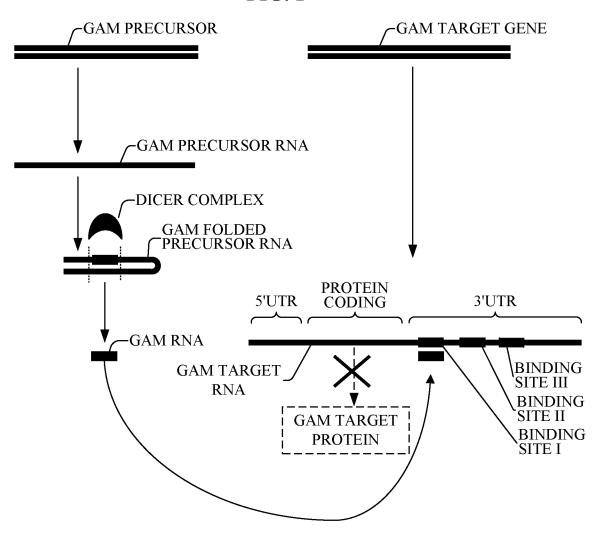


FIG. 2 -102 ~ 104 -106**EXPRESSED SEQUENCED PROTEIN DNA DATA FUNCTION DATA RNA DATA** -110**BIOINFORMATIC -**100 **OLIGONUCLEOTIDE BIOINFORMATIC OLIGONUCLEOTIDE DETECTION ENGINE DETECTION ENGINE TRAINING &** -112**VALIDATION** NON-PROTEIN-CODING GENOMIC **FUNCTIONALLITY** SEQUENCE DETECTOR **-**114 **HAIRPIN DETECTOR** -116 **DICER-CUT LOCATION DETECTOR** -118TARGET GENE BINDING SITE **DETECTOR** -120**FUNCTION & UTILITY ANALYZER** -108 **BIOINFORMATICALLY-DETECTED GROUP OF NOVEL**

OLIGONUCLEOTIDES

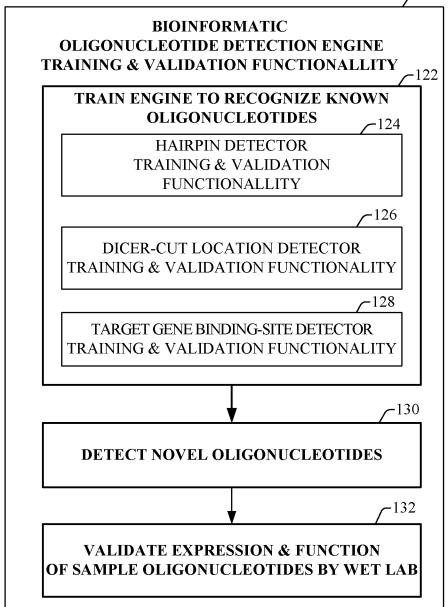


FIG. 4A

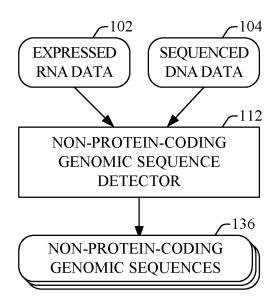


FIG. 4B

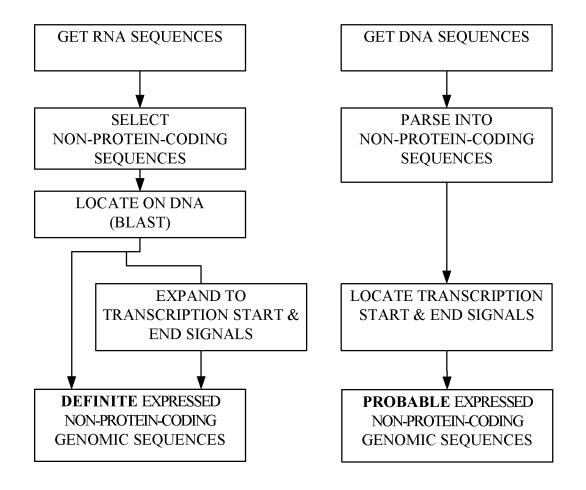


FIG. 5A

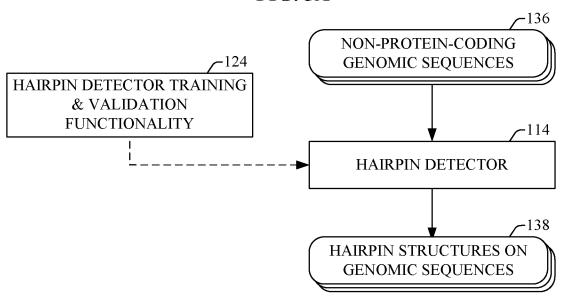


FIG. 5B

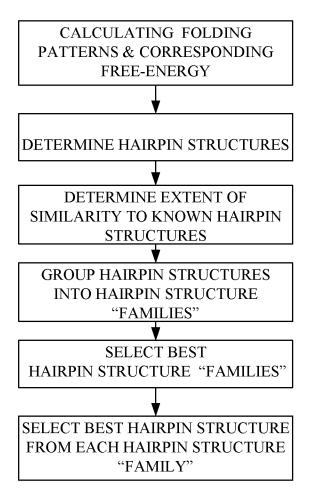


FIG. 6A

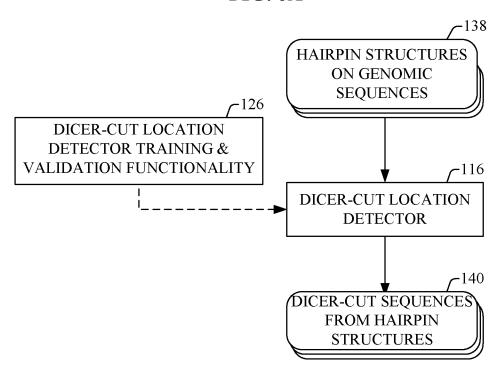


FIG. 6B

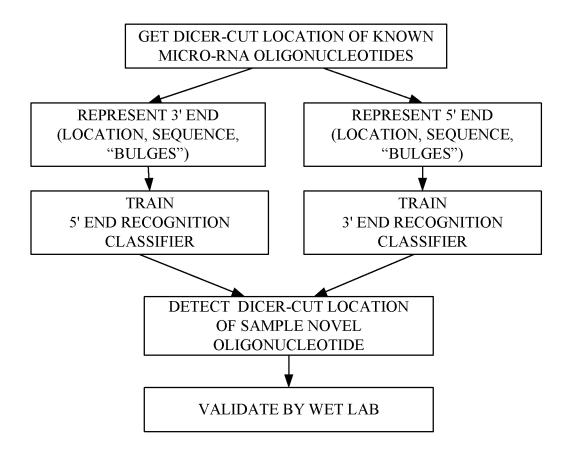
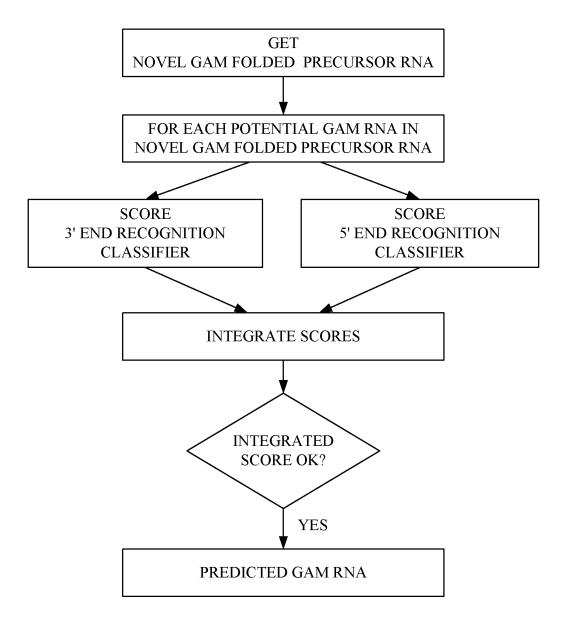


FIG. 6C



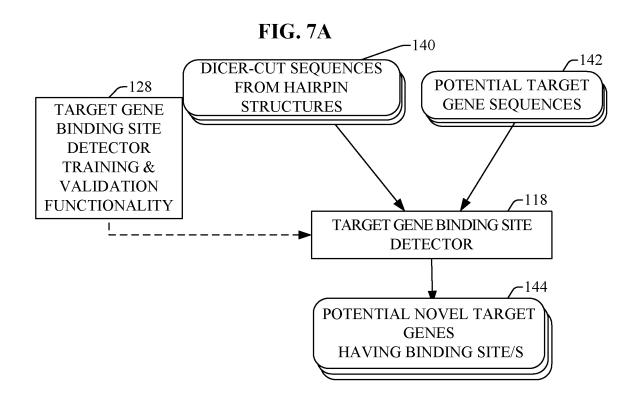


FIG. 7B

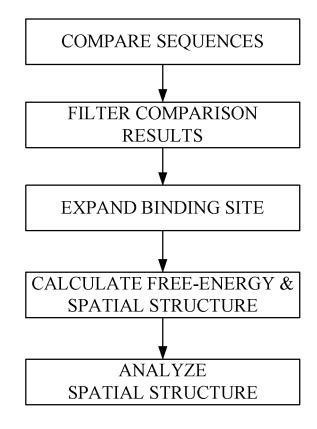


FIG. 8

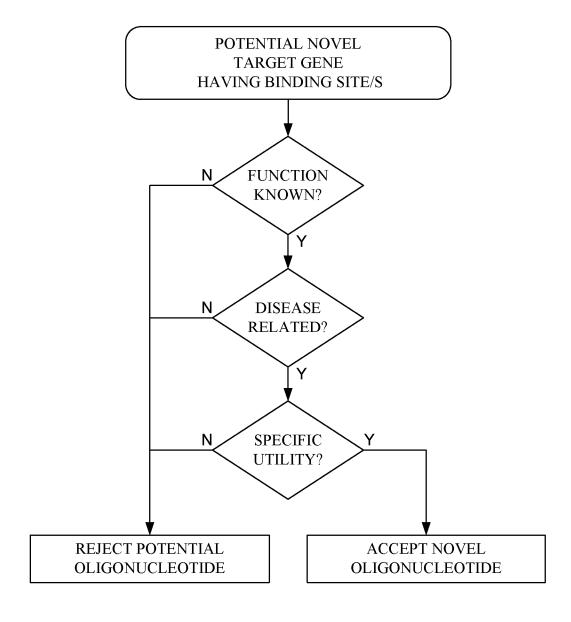
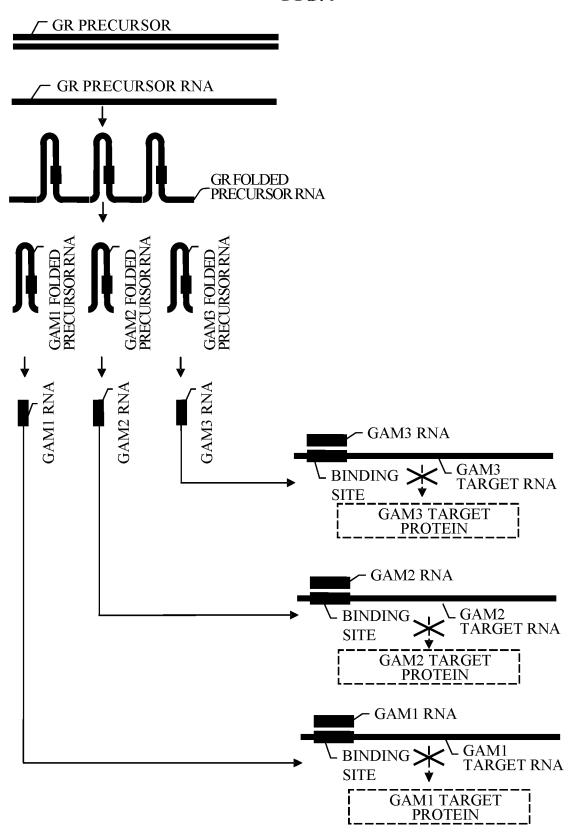


FIG. 9



GAM DETECTION

GAM REPLACEMENT THERAPY

ANTI-GAM THERAPY

MODIFIED GAM THERAPY

FIG. 11A FIG. 11B -GAM PRECURSOR -GAM PRECURSOR **GAM PRECURSOR GAM PRECURSOR** RNA RNA -DICER COMPLEX -DICER COMPLEX **GAM FOLDED GAM FOLDED** PRECURSOR RNA PRECURSOR RNA -GAMRNA -GAMRNA ANTI-GAM RNA **GAM GAM** -GAMRNA TARGET **TARGET** RNA RNA BINDING BINDING SITE SITE GAM TARGET i **GAM TARGET PROTEIN PROTEIN**

FIG. 12A

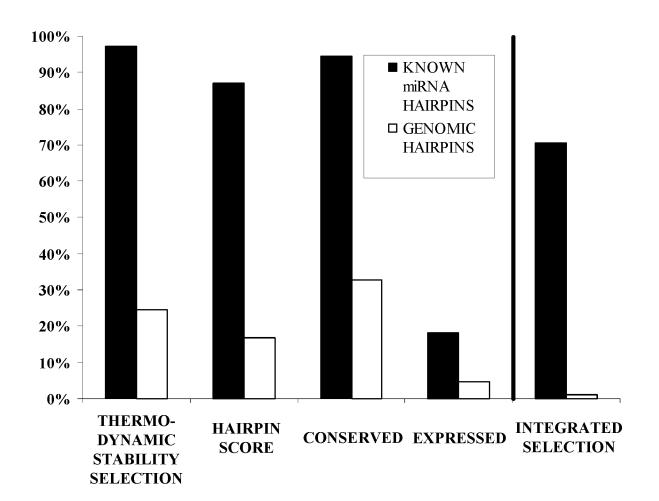


FIG. 12B

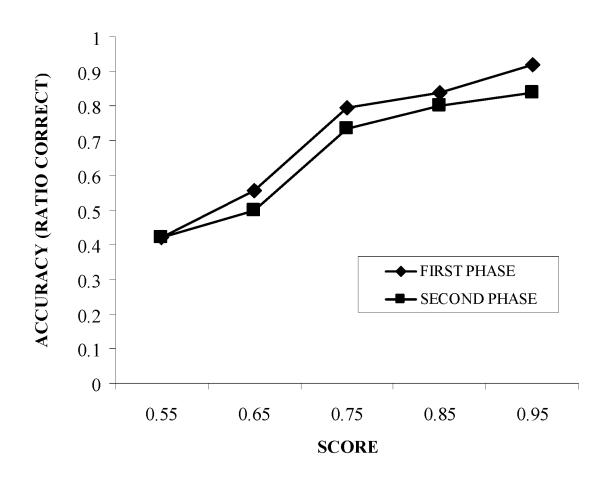


FIG. 12C

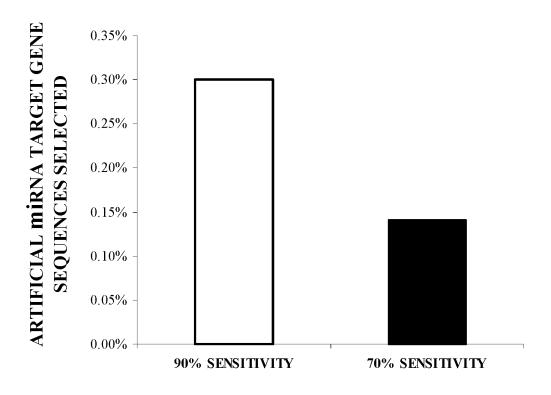


FIG. 13

ROW	PRIMER SEQUENCE	SEQUENCED SEQENCE	PREDICTEDGAM RNA	DIST- ANCE	GAM NAME
1 *	ААТТӨСТТӨААС	CCAGGAAGTGGA	AATTGCTTGAACCCAGGAAGTGGA	0	25-A
2*	ACTGCACTCC	AGCCTGGGC	ACTGCACTCCAGCCTGGGCTAC	0	351661-A
3	CACTGCACTC	CAGCCCGAGCAACA	CACTGCACTCCAGCCCGAGCAA	0	351946-A
4	CTAGACTGAAG	CTCCTTGAGGAC	CTAGACTGAAGCTCCTTGAGGA	0	352759-A
5	GAAGTTTGAAG	сстептептса	GAAGTTTGAAGCCTGTTGTTCA	0	4426-A
9			(TCACTGCAACCTCCACCACGTG),(TC		(357950-
C	TCACTGCAAC	CTCCACCA	ACTGCAACCTCCACCAGCCT)	0	A),(352721-A)
*7	TCTAAGAGAAAG	GAAGTTCAGA	TCTAAGAGAAAGGAAGTTCAGA	0	337950-A
8	GGGCAGTGGA	GCTGGAA	GGGCGTGGAGCTGGAATGATGT	_	351996-A
6	ААТТСТТСВААС	CCAAGAAGTGGA	AATCACTTGAACCCAAGAAGTG	2	351874-A
10	AGCAGCCCA	GGGTTTTGT	AGCAAGACCAGGGTTTTGTGTT	2	352083-A
11	AGGCAAGACG	GACCAGA	AGGCAGAGAGACCAGAGACT	2	351944-A
12	AGGGAAAGAAT	TAATGTGAA	GGGAAATAATTAATGTGAAGTC	2	353325-A
13	AGGGAAAGAAT	TAATGTGAG	AGGAAAAAAATTAATGTGAGTC	2	352649-A
14			(АПТЕПТЕСССАТЕПППАПП),		A),(352957-
1	АПСАСТС	CCCATGTTT	(TATTCATTGCCCATGTTTGTGA)	2	A,352960-A)
15	CTAGACTGAAG	СТССТТВАВВ	CTGGACTGAGCTCCTTGAGGCC	2	352288-A
16	TTCAGAGTGGT	ТААСТІСТС	ТТСТGАТGGTTAAGTTCTGTCA	2	353875-A
17	TTCAGAGTGGT	TAAGTTCTGC	ТТСААСТСТТААСТТСТССТТ	2	351940-A
18	AGCAGCCCA	GAAGGAAGC	AGGCCAAGAAGGAAGCAGAGG	3	352496-A
19	АСППСССПС	TAAGAAAAG	AGTTTGTGTAAGAAAAGC	3	352518-A
20	ATCAGAGGGTG	GGTGCTAA	ATTAGGAGAGTGGGTGCTAAGT	3	352511-A
12	ATGGTGGGAG	AGTTTGTCAGT	TGGAGGAGAGTTTGTCAGTATAG	3	353484-A
22	CCCAGGAAG	TGGAGCCTGGGC	CCCGGGTGGAGCCTGGGCTGTG	3	351990-A
23	GGGCAGTGGA	<u> </u>	AGGGCAGGAGGTCCGTCCCTTC	3	353880-A
24	GGGCAGTGGA	TCTAGAC	GTGACAGTGAATCTAGACAGAC	ယ	352810-A
25	TCAAGCTCATTC	CACTAAA	CTCAGCTCATCCACTAAATCCC	3	353184-A
95	TGGAAAGTT	GGTTGTATGGTT	GGAATGGTGGTTGTATGGTTG	3	353855-A
27	TGGAGAGTT	CCATATTITG	TGATAGATCCATATTTTGGTAA	3	352004-A
28	TGGAGAGTT	GTTTGTACAGT	TGGGTTTTGTTGTACAGTGTA	3	353160-A
92	TCACTGCAAC	CTCCACC	TCACTGCAACCTCCACCTTCCG	0	353856-A

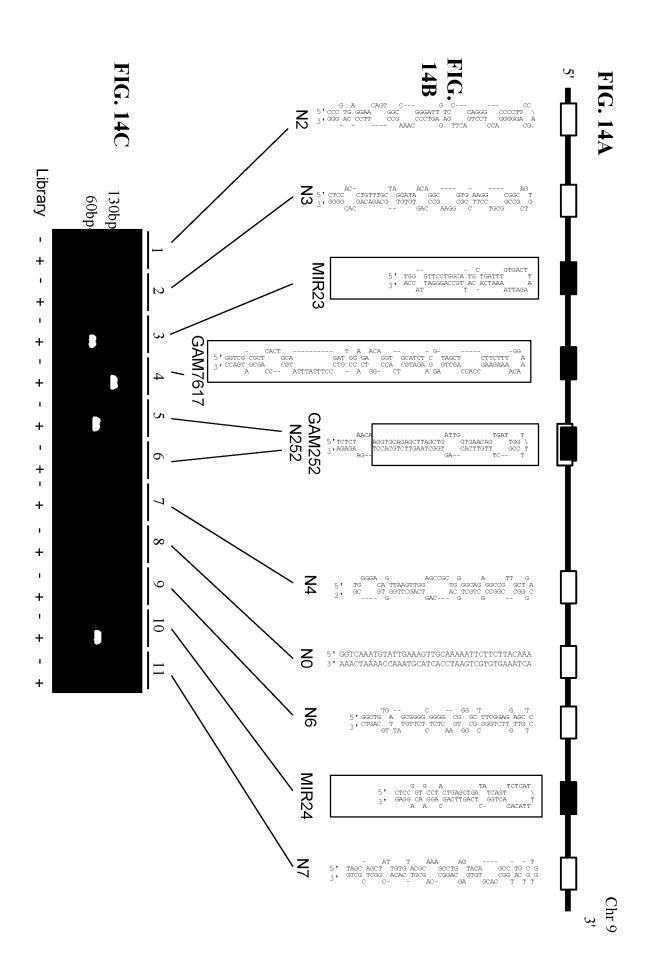
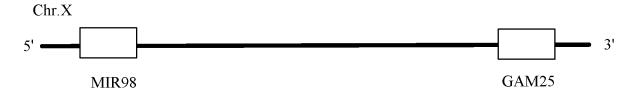


FIG. 15A

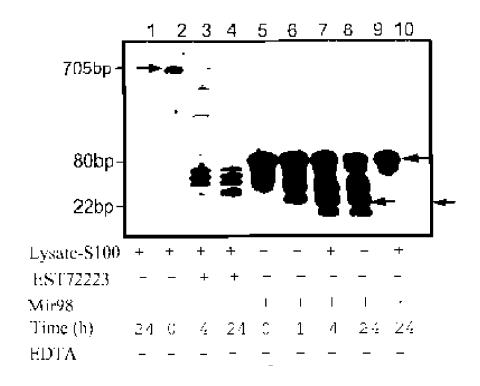
EST72223 (705 nt.)



EST72223 sequence:

CCCTTATTAGAGGATTCTGCTCATGCCAGGGTGAGGTAGTAAGTTGTATTG **TTGTGGGGTAGGGATATTAGGCCCCAATTAGAAGATAACTATACAACT** MIR98 TACTACTTCCCTGGTGTGTGGCATATTCACACTTAGTCTTAGCAGTGTTGCC TCCATCAGACAAAGTTGTAGATGTTCCTTGGATAATTTGGACTGGAAGAAAAGA GACATGGAAGGGGACAGATGGTGTTTAGGGTGAGGCAGATGTCATTATAAAGT GACTTGTCTTTCATTAATTGGAGCATATAATTATTTTACCTTTGGGCATGAACTC ATTTTGCTATTCTTCAACTGTGTAATGATTGCATTTTATTAGTAATAGAACAGGA ATGTGTGCAAGGGAATGGAAAGCATACTTTAAGAATTTTGGGCCAGGCGCGGT GGTTCATGCCTGTAATCCCAGCATTTTTGGGAGGCCGAGGCGGGTGGATCAC CTGAGGTCAGGAGTTCGAGACCAACCTGGCCAACACGGCGAAACCCCGCCTC TACTCAAATACAAAAATTAGCCAGGCTTGGTGACACTCGCCTGTGGTCCCAGC GAM25 TACTCAGGAGGCTGAGGCAGGAGAATTGCTTGAACCCAGGAAGTGGAG GCTTCAGTGAGCTGAGAACACGCCACTGCACTCCAGTCCTGGGCAAC **AGAGCAAGACTCTGTCTC**AGGAAAAAAAAA

FIG. 15B



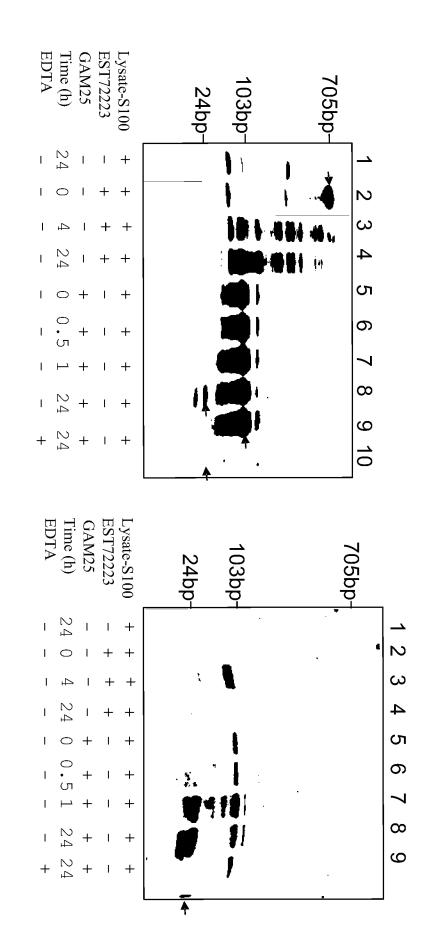


FIG. 16A

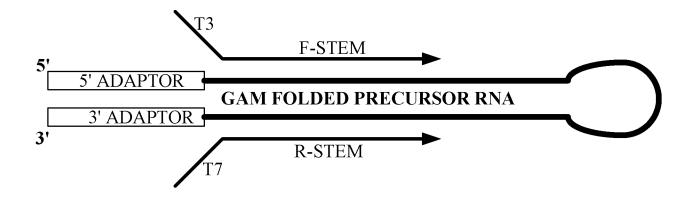


FIG. 16B

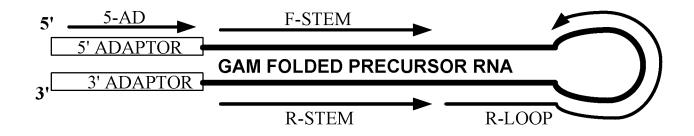


FIG. 16C

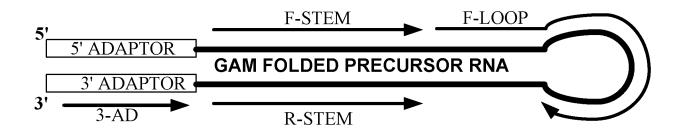


FIG. 17A

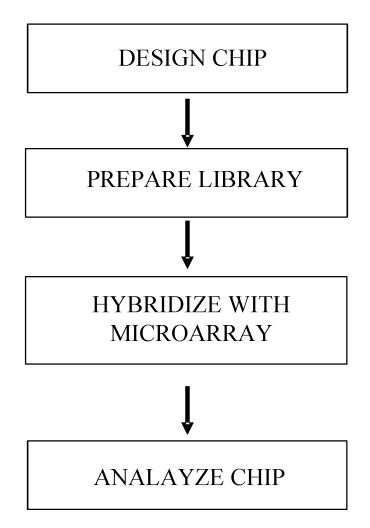


FIG. 17B

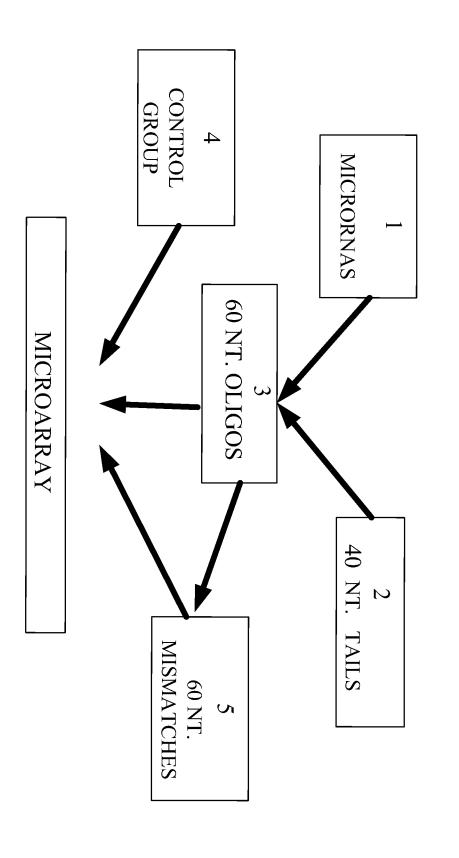


FIG. 17C

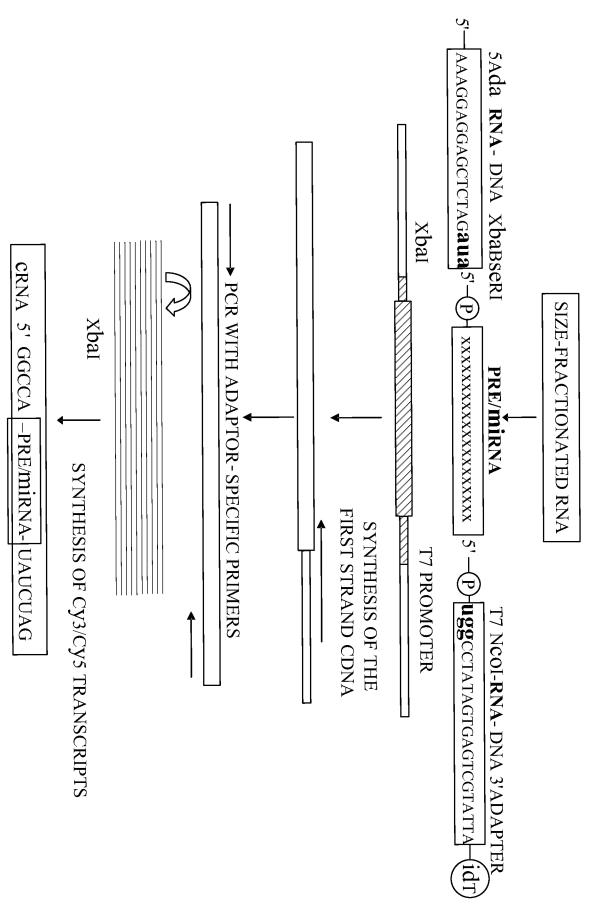


FIG. 18A

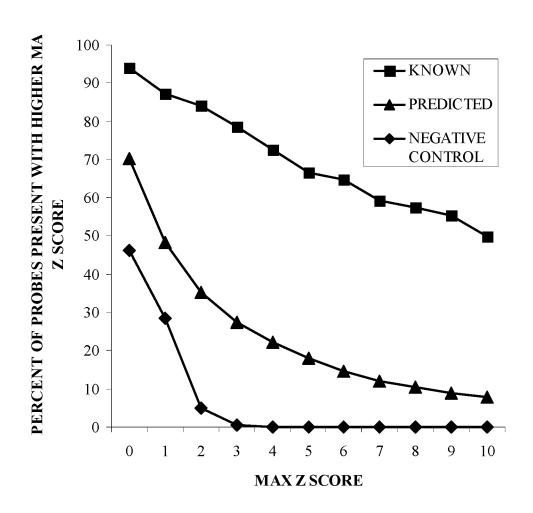


FIG. 18B

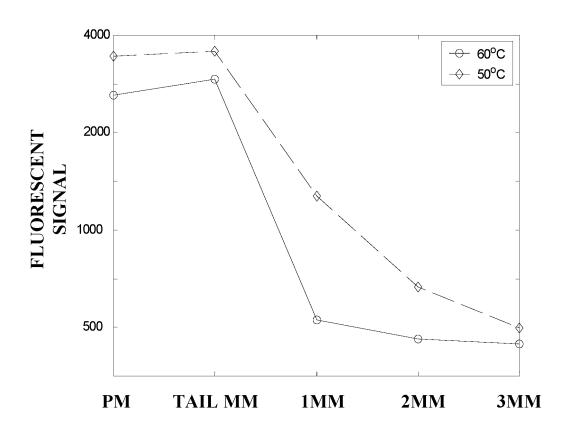


FIG. 18C

	0		יביים ביטו טל	۸ ٦	LI VIVENIUO SOOV	1 1000	J
	8840	3100	776	709	725	465	HSA-MIR-136
	33532	1478	10636	1027	595	556	HSA-MIR-200C
	40076	11173	6021	2990	3492	1312	HSA-MIR-23A
	46845	2000	4063	1220	805	696	HSA-MIR-141
	54287	10608	20212	3520	9325	625	HSA-MIR-221
	62452	15288	6864	10703	2280	844	HSA-MIR-210
	65518	5377	32305	7684	11061	3233	HSA-MIR-224
	997	2250	763	698	617	448	HSA-MIR-134
	9637	14750	3309	1914	733	438	HSA-MIR-154
	738	23083	3871	477	433	410	HSA-MIR-10B
	6233	64859	6535	1757	3898	525	HSA-MIR-204
	2138	1681	8754	1286	1123	1026	HSA-MIR-183
	3683	2034	25771	1091	1944	662	HSA-MIR-182
	39072	2645	65518	1646	615	551	HSA-MIR-205
	5280	29728	65518	5295	1463	648	HSA-MIR-150
	5466	2266	44800	1477	3100	887	HSA-MIR-96
	2607	1263	1628	20650	606	452	HSA-MIR-192
	2711	6204	5250	38436	620	413	HSA-MIR-148
3	7952 3	2342	4737	65518	910	501	HSA-MIR-194
1,3	570 1,3	617	2644	65518	447	1051	HSA-MIR-122A
	2027	5383	4819	3954	21969	1168	HSA-MIR-128B
3	2017 3	5364	2213	1175	22573	503	HSA-MIR-129
3	2495	5166	4876	4940	27701	2015	HSA-MIR-128A
2,3	2313 2,3	4485	4455	3504	42659	642	HSA-MIR-9
1,3	2498 1,3	2672	3099	7025	65517	1879	HSA-MIR-124A
REFERENCE	PLACENTA	TESTES	THYMUS	LIVER	BRAIN	HELA	MIRNA NAME

1 LAGOS-QUINTANA ET AL., CURRENT BIOLOGY 12:735 (2002) 2 KRICHEVSKY ET AL., RNA 9:1274 (2003) 3 SEMPERE ET AL., GENOME BIOLOGY 5:R13 (2004)